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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,951

05/30/2006

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EXAMINER

BROCKMAN, ANGEL T

ART UNIT

PAPER NUMBER

2463

MAIL DATE

DELIVERY MODE

02/18/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,951	Applicant(s) BODIN ET AL.	
	Examiner ANGEL BROCKMAN	Art Unit 2463	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Claims 1-16 and 18 were formerly rejected under 35 U.S.C. 103 (a). Pursuant to applicant's amendments, these rejections have been withdrawn.

Response to Arguments

1. Applicant's arguments, see Remarks, filed December 1, 2009 with respect to claims 1-16, 18 and 19 have been fully considered and are persuasive. The 35 U.S.C. 103 (a) rejection of claims 1-16, 18 and 19 has been withdrawn.

Claim Rejections - 35 USC § 103

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bearden et al.(US 2003/0086425, herein after Bearden) in view of Hluchyj et al.(US 5,488,609, hereinafter Hluchyj).

Regarding **claim 1**, Bearden discloses measuring end-to-end forwarding quality in measurement nodes located outside a network core (¶[0213], figure 4, wherein 330 is located outside a network core); detecting quality violations in at least one path between the measurement nodes (¶[0092]-¶[0094],¶[0223]), figure 4, wherein the collected network statistics and information includes the quality violations) ;selecting at least one potentially overloaded interface along the at least one path (figure 4, ¶[0206]-¶[0207]) where forwarding quality violations were detected by combining knowledge about different end-to-end measurements performed in the data network with knowledge about network topology and knowledge about booking levels and forwarding capacity for interfaces along the at least one path (figure 4, ¶[0089],¶[0092], MIB tables include configuration data and stored in Data Store (340),¶[0237]). Bearden does not disclose defining a new or adjusting an already exiting provisioning level for each selected interface, the provisioning level defining a maximum admitted sum of forwarding resources requested directly or indirectly by applications for their application data flows for the interfaces, such that usage of each path detected to have forwarding quality violations is limited to one or more interfaces. Hluchyj discloses defining a new or adjusting an already exiting

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provisioning level for each selected interface, the provisioning level defining a maximum admitted sum of forwarding resources requested directly or indirectly by applications for their application data flows for the interfaces, such that usage of each path detected to have forwarding quality violations is limited to one or more interfaces (column 4, lines 35-67column 5, lines 1-58, figure 3, figure 6). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the adjustment as disclosed by Hluchuyj along with the system of Bearden. The rate adjustment can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the adjustment as disclosed by Hluchuyj along with the system of Bearden is to increase the efficiency of the system.

Regarding **claim 2**, Bearden discloses all subject matter of the claimed invention as set forth above in claim 1, with the exception of iterating the method to improve provision settings of the network. Hluchyj discloses iterating the method to improve provision settings of the network (figure 3, figure 6).). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the iteration as disclosed by Hluchuyj along with the system of Bearden. The iteration can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the iteration as disclosed by Hluchuyj along with the system of Bearden is to increase the efficiency of the system.

Regarding **claim 3**, Bearden discloses storing information about previous end-to-end measurements and previous booking levels for the interfaces (figure 4, wherein the data store includes the previous measurements and booking levels, [0207])).

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Regarding **claim 4**, Bearden discloses the selecting is performed at least in part by using history of previous booking levels with associated quality violations, forwarding capacities, and/or provisioning levels for the interfaces (figure 4, ¶ [0206]-¶ [0207]).

Regarding **claim 5**, Bearden discloses detecting that a previously set provisioning level for an interface is reached without any measured quality violation on paths involving the interface (figure 4, ¶[0092], ¶[0094], ¶[0099], ¶[0023], wherein violation is detected using statistics, metrics, path information); and by using the stored information of previous end-to-end measurements and previous booking levels, selecting at least one other interface that probably caused the end-to-end forwarding quality violation measured when the previously set provisioning level was set(¶[0206]-¶[0207], figure 4, ¶[0213]). Bearden does not disclose removing or increasing the provisioning level for the previously selected interface, and providing a provisioning level to the at least one other interface, or if no other potentially overloaded interface exist, increasing the limiting provisioning level. Hluchyj discloses removing or increasing the provisioning level for the previously selected interface, and providing a provisioning level to the at least one other interface, or if no other potentially overloaded interface exist, increasing the limiting provisioning level(column 4, lines 35-67, figures 3-6). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the adjustment as disclosed by Hluchuyj along with the system of Bearden. The rate adjustment can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the adjustment as disclosed by Hluchuyj along with the system of Bearden is to increase the efficiency of the system.

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Regarding **claim 6**, Bearden discloses all subject matter of the claimed invention as set forth above in claim 1, with the exception of the defining of the new or adjusting of the already existing provisioning level for each selected interface is performed at least in part by setting the provisioning level equal to the booking level for the selected interface at the time of the detected violation. Hluchyj discloses the defining of the new or adjusting of the already existing provisioning level for each selected interface is performed at least in part by setting the provisioning level equal to the booking level for the selected interface at the time of the detected violation (column 5, lines 1-9, wherein the agreed rate is the booking level of the interface). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the adjustment as disclosed by Hluchyj along with the system of Bearden. The rate adjustment can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the adjustment as disclosed by Hluchyj along with the system of Bearden is to increase the efficiency of the system.

Regarding **claim 7**, Bearden discloses all subject matter of the claimed invention as set forth above in claim 1, with the exception of the defining of the new or adjusting of the already existing provisioning level for each selected interface is performed at least in part by setting the provisioning level lower than the booking level in the selected interface at the time of the detected forwarding quality violation and either pre-empting some reservations to reach the provisioning level or waiting for some reservations to be released to reach the provisioning level. Hluchyj discloses the defining of the new or adjusting of the already existing provisioning level for each selected interface is performed at least in part by setting the provisioning level lower than the booking level in the selected interface at the time of the detected forwarding quality

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violation(column 4, lines 35-67, wherein the rate is adjusted down or lowered).It is well known in the art to either pre-empting some reservations to reach the provisioning level or waiting for some reservations to be released to reach the provisioning level (column 2, lines 15-25). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the adjustment as disclosed by Hluchuyj along with the system of Bearden. The rate adjustment can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the adjustment as disclosed by Hluchuyj along with the system of Bearden is to increase the efficiency of the system.

Regarding **claim 8**, Bearden discloses all subject matter of the claimed invention as set forth above in claim 6, with the exception of wherein choosing one of the described provisioning level setting methods depends of which level of quality violation was measured. Hluchuyj discloses wherein choosing one of the described provisioning level setting methods depends of which level of quality violation was measured (column 4, lines 35-67, figure 3). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the adjustment as disclosed by Hluchuyj along with the system of Bearden. The rate adjustment can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the adjustment as disclosed by Hluchuyj along with the system of Bearden is to increase the efficiency of the system.

Regarding **claim 9**, Bearden discloses receiving means to receive information of end-to-end measurements of forwarding quality performed in the data network(¶[0213], figure 4) and to receive information of the network topology and levels and forwarding capacities for interfaces in the data network (figure 4, ¶[0089]); selecting means (figure 4) connected to the receiving

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means to combine information from the end-to-end measurements with the topology information and the information of booking levels to select at least one at least one potentially overloaded interface comprised in at least one path (figure 4, ¶[0206]-¶[0207]) where forwarding quality violations were detected by the end-to-end measurements of forwarding quality (figure 4, ¶[0089], ¶[0092], MIB tables include configuration data and stored in Data Store (340), ¶[0237]). Bearden does not disclose provisioning level defining and adjusting means connected to the selecting means to define a new or adjust an already exiting provisioning level for each selected interface, the provisioning level defining a maximum admitted sum of forwarding resources requested directly or indirectly by applications for their application data flows for the interfaces, such that usage of each path detected to have forwarding quality violations is limited to one or more interfaces. Hluchyj provisioning level defining and adjusting means connected to the selecting means to define a new or adjust an already exiting provisioning level for each selected interface, the provisioning level defining a maximum admitted sum of forwarding resources requested directly or indirectly by applications for their application data flows for the interfaces, such that usage of each path detected to have forwarding quality violations is limited to one or more interfaces (column 4, lines 35-67column 5, lines 1-58, figure 3, figure 6). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the adjustment as disclosed by Hluchyj along with the system of Bearden. The rate adjustment can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the adjustment as disclosed by Hluchyj along with the system of Bearden is to increase the efficiency of the system.

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Regarding **claim 10**, Bearden discloses all subject matter of the claimed invention as set forth above in claim 1, with the exception of iterating the method to improve provision settings of the network. Hluchyj discloses iterating the method to improve provision settings of the network (figure 3, figure 6).). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the iteration as disclosed by Hluchuyj along with the system of Bearden. The iteration can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the iteration as disclosed by Hluchuyj along with the system of Bearden is to increase the efficiency of the system.

Regarding **claim 11**, Bearden discloses storing means connected to the receiving means and to the selecting means and storing means to store information about previous end-to-end measurements and previous booking levels for the interfaces (figure 4, wherein the data store includes the previous measurements and booking levels,[0207]))

Regarding **claim 12**, Bearden discloses the selecting means retrieves information from storing means in order to use history of previous booking levels with associated quality violations, forwarding capacities, and/or provisioning levels for the interfaces (figure 4, ¶ [0206]-¶ [0207]).

Regarding **claim 13**, Bearden discloses detecting that a previously set provisioning level for an interface is reached without any measured quality violation on paths involving the interface (figure 4, ¶[0092],¶[0094],¶[0099],¶[0023], wherein violation is detected using statistics, metrics, path information); and by using the stored information of previous end-to-end measurements and previous booking levels, selecting at least one other interface that probably caused the end-to-end forwarding quality violation measured when the previously set

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provisioning level was set(¶[0206]-¶[0207], figure 4, ¶[0213]). Bearden does not disclose removing or increasing the provisioning level for the previously selected interface, and providing a provisioning level to the at least one other interface, or if no other potentially overloaded interface exist, increasing the limiting provisioning level. Hluchyj discloses removing or increasing the provisioning level for the previously selected interface, and providing a provisioning level to the at least one other interface, or if no other potentially overloaded interface exist, increasing the limiting provisioning level(column 4, lines 35-67, figures 3-6). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the adjustment as disclosed by Hluchuyj along with the system of Bearden. The rate adjustment can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the adjustment as disclosed by Hluchuyj along with the system of Bearden is to increase the efficiency of the system.

Regarding **claim 14**, Bearden discloses all subject matter of the claimed invention as set forth above in claim 9, with the exception of the defining of the new or adjusting of the already existing provisioning level for each selected interface is performed at least in part by setting the provisioning level equal to the booking level for the selected interface at the time of the detected violation. Hluchyj discloses the defining of the new or adjusting of the already existing provisioning level for each selected interface is performed at least in part by setting the provisioning level equal to the booking level for the selected interface at the time of the detected violation (column 5, lines 1-9, wherein the agreed rate is the booking level of the interface). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the adjustment as disclosed by Hluchuyj along with the system of Bearden. The rate

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adjustment can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the adjustment as disclosed by Hluchuyj along with the system of Bearden is to increase the efficiency of the system.

Regarding **claim 15**, Bearden discloses all subject matter of the claimed invention as set forth above in claim 9, with the exception of the defining of the new or adjusting of means sets the provisioning level lower than the booking level in the selected interface at the time of the detected forwarding quality violation and either pre-empting some reservations to reach the provisioning level or waiting for some reservations to be released to reach the provisioning level. Hluchyj discloses the defining of the new or adjusting of the already existing provisioning level for each selected interface is performed at least in part by setting the provisioning level lower than the booking level in the selected interface at the time of the detected forwarding quality violation(column 4, lines 35-67, wherein the rate is adjusted down or lowered).It is well known in the art to either pre-empting some reservations to reach the provisioning level or waiting for some reservations to be released to reach the provisioning level (column 2, lines 15-25). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the adjustment as disclosed by Hluchuyj along with the system of Bearden. The rate adjustment can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the adjustment as disclosed by Hluchuyj along with the system of Bearden is to increase the efficiency of the system.

Regarding **claim 16**, Bearden discloses all subject matter of the claimed invention as set forth above in claim 14, with the exception of wherein the defining or adjusting means chooses one of the provisioning level setting methods depends of which level of quality violation was

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measured. Hluchyj discloses wherein defining or adjusting means chooses one of the described provisioning level setting methods depends of which level of quality violation was measured (column 4, lines 35-67, figure 3). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the adjustment as disclosed by Hluchuyj along with the system of Bearden. The rate adjustment can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the adjustment as disclosed by Hluchuyj along with the system of Bearden is to increase the efficiency of the system.

Regarding **claim 18**, Bearden discloses all subject matter of the claimed invention as set forth above in claim 1, with the exception of wherein choosing one of the described provisioning level setting methods depends of which level of quality violation was measured. Hluchyj discloses wherein choosing one of the described provisioning level setting methods depends of which level of quality violation was measured (column 4, lines 35-67, figure 3). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the adjustment as disclosed by Hluchuyj along with the system of Bearden. The rate adjustment can be implemented into the system of Bearden through hardware and software implementation. The motivation for utilizing the adjustment as disclosed by Hluchuyj along with the system of Bearden is to increase the efficiency of the system.

Regarding **claim 19**, Bearden discloses storing information about previous end-to-end measurements and previous booking levels for the interfaces (figure 4, wherein the data store includes the previous measurements and booking levels, [0207]).

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Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANGEL BROCKMAN whose telephone number is (571)270-5664. The examiner can normally be reached on Monday-Friday ,7:30-5:00pm.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ANGEL BROCKMAN
Examiner
Art Unit 2463

/A. B./
Examiner, Art Unit 2463

/Derrick W Ferris/
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